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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/429,641	10/29/1999	BRETT G. CLARK	00354.77783	6163

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EXAMINER

FUREMAN, JARED

ART UNIT PAPER NUMBER

2876

DATE MAILED: 11/06/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)
	09/429,641	CLARK, BRETT G. <i>H</i>
Examiner	Art Unit	
Jared J. Fureman	2876	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) Responsive to communication(s) filed on 02 August 2002 and 22 February 2002.

2a) This action is FINAL. 2b) This action is non-final.

3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) Claim(s) 1-6,8-28 and 35-51 is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5) Claim(s) 49-51 is/are allowed.

6) Claim(s) 1-6,8-28 and 35-48 is/are rejected.

7) Claim(s) _____ is/are objected to.

8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) The specification is objected to by the Examiner.

10) The drawing(s) filed on _____ is/are: a) accepted or b) objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11) The proposed drawing correction filed on _____ is: a) approved b) disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.

12) The oath or déclaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) All b) Some * c) None of:
1. Certified copies of the priority documents have been received.
2. Certified copies of the priority documents have been received in Application No. _____.
3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.

14) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) The translation of the foreign language provisional application has been received.

15) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)	4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____
2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)	5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)
3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) Z	6) <input type="checkbox"/> Other: _____

DETAILED ACTION

Receipt is acknowledged of the response to election of species requirement filed on 8/2/2002, which has been entered in the file. Upon further consideration, the election of species requirement has been withdrawn. Previously, it was believed that the application contained claims directed to two different species (Figure 1 and Figure 3), however, it is now believed that the previous claim interpretations were too narrow. For this reason, the election of species requirement has been withdrawn. Any inconvenience to applicants is regretted. Claims 1-6, 8-28, and 35-51 are pending.

Claim Objections

1. Claims 44 and 45 are objected to because of the following informalities:

Claim 44, line 5: --first-- should be inserted before "splice", in order to clarify the claim.

Claim 45 recites, "The portable data collection apparatus of claim 44, further including the storage device, wherein the storage device is in wireless communication with the processor. The phrase "further including the storage device" indicates that the portable data collection apparatus includes the storage device. While figure 1 shows a data collection system 100 including a storage device 102 in communication with a processor 103, there is no teaching that the storage device 102 is in wireless communication with the processor 103. Likewise, figure 3 shows a data collection system 310 including a storage device 305 in communication with a processor 103, there is no teaching that the storage device 305 is in wireless communication with the processor 103. It is noted that storage device 122 is in wireless communication with the

data collection systems 100 and 310, however, there is no support for the portable data collection apparatus further including the storage device wherein the storage device is in wireless communication with the processor (for example, storage device 102 or 305 being in wireless communication with processor 103). For examination purposes, the limitation "wherein the storage device is in wireless communication with the processor" has not been considered.

Appropriate correction is required.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1-3, 5, 8, 12-14, 17, 19, 20, 24, 25, 28, 35-37, and 39-43 are rejected under 35 U.S.C. 103(a) as being unpatentable over Pan et al (US 5,386,490, cited by applicant) in view of Cohen (US 5,821,510).

Pan et al teaches an apparatus (control unit 11) and associated method for receiving splice data for each of a plurality of optical fiber splices, each of the plurality of optical fiber splices being uniquely identified by at least one of a plurality of splice numbers (coupler number), the apparatus comprising: a data interface (connected to optical fibers 12) for receiving the splice data, and a data storage device (a database for storing fabrication data files) coupled with the data interface, for receiving the splice data and the splice number from the data interface and for storing the splice data and

the splice number, wherein the data storage device stores the splice data and the splice number such that, for each of the optical fiber splices, the splice data and the splice number for a respective optical fiber splice are stored together in a unique data record (fabrication data file), the apparatus is coupled with a splicer (operations unit 10 including heat and fusion subsystem 50), wherein the data interface includes a splicer input interface configured to receive the splice data from a splicer, the splice data includes manufacture date associated with each of the optical fiber splices, the plurality of optical fiber splices are uniquely defined by the plurality of splice numbers within a particular optical fiber system, an output data interface including a data port for outputting (printing, see figure 9B) the splice data, a display (monitor 13) coupled with the output data interface for displaying the splice data (see figures 1-3, 9A, 9B, column 1 lines 51-56, column 2 lines 25-44, column 3 lines 4-7, column 4 line 45 - column 5 line 51, and column 8 line 49 - column 9 line 9).

While Pan et al teaches the use of a unique coupler number for each optical fiber splice (see figure 9A), Pan et al fails to specifically teach each of the optical fiber splices being uniquely identified by at least one of a plurality of splice indicia; the splice data including cross reference information representing a cross reference between one of the plurality of optical fiber splices and another one of the plurality of optical fiber splices, a bar code reader coupled with the data interface for reading the splice indicia, a processor coupled with the data storage device for retrieving from the data storage device the splice data associated with the selected splice indicium, selecting the selected splice indicium, inputting the selected splice indicium to an input device,

retrieving from a storage device coupled to the input device the splice data associated with the selected splice indicium, an external storage device interface comprising a wireless transmitter for wirelessly transmitting the splice indicia to an external storage device.

Cohen et al teaches an apparatus for selecting splice data for an optical fiber splice (each receptacle 6 represents an optical fiber splice, since it is a connection point between different optical fibers) based on a selected splice indicium (optically-encoded data 9 corresponding to a specific receptacle 6) from a plurality of unique splice indicia (each receptacle 6 includes unique optically-encoded data 9), each of the optical fiber splices being uniquely identified by at least one of a plurality of splice indicia, splice data (for example: the physical location of the receptacle, the type of jumper to be used with the receptacle, etc., see at least column 2 line 66 - column 3 line 24) including cross reference information representing a cross reference between one of the plurality of optical fiber splices and another one of the plurality of optical fiber splices (the identity of the physical location of the receptacle to which the other end of the jumper is to be attached, see at least column 3 lines 16-24 and column 10 lines 13-18), a bar code reader (optical scanner 14) coupled with a data interface for reading the splice indicia, a processor (17) coupled with a data storage device (18) for retrieving from the data storage device the splice data associated with the selected splice indicium, selecting the selected splice indicium, inputting the selected splice indicium to an input device, retrieving from a storage device coupled to the input device the splice data associated with the selected splice indicium, an external storage device interface comprising a

wireless transmitter (a radio transmitter within scanner 14) for wirelessly transmitting the splice indicia to an external storage device (receiver interface 16 and computer 15) (see figures 1A, 1B, 4-6, column 1 lines 31-42, column 2 lines 18-60, column 2 line 66 - column 3 line 65, column 4 line 33 - column 7 line 60, column 9 line 11 - column 10 line 18).

In view of Cohen et al's teachings, it would have been obvious to one of ordinary skill in the art at the time of the invention to include, with the apparatus and method as taught by Pan et al, each of the optical fiber splices being uniquely identified by at least one of a plurality of splice indicia, the splice data including cross reference information representing a cross reference between one of the plurality of optical fiber splices and another one of the plurality of optical fiber splices, a bar code reader coupled with the data interface for reading the splice indicia, a processor coupled with the data storage device for retrieving from the data storage device the splice data associated with the selected splice indicium, selecting the selected splice indicium, inputting the selected splice indicium to an input device, retrieving from a storage device coupled to the input device the splice data associated with the selected splice indicium, an external storage device interface comprising a wireless transmitter for wirelessly transmitting the splice indicia to an external storage device, in order to provide the capability to readily determine information associated with the splice (receptacle).

4. Claims 4, 15, and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Pan et al as modified by Cohen et al as applied to claims 1 and 13 above, and further in view of Miller et al (US 5,747,785).

Pan et al as modified by Cohen et al fails to specifically teach a storage medium removably connected with the data storage device, the splice data and the splice indicia being stored on the storage medium, the data storage device comprising a memory chip, the splice data and the splice indicia being stored in the memory chip.

Miller et al teaches an apparatus (terminal device 10) including a storage medium (a user replaceable EPROM) removably connected with a data storage device (a CMOS memory), data being stored on the storage medium, the data storage device comprising a memory chip (the CMOS memory), the data being stored in the memory chip (see figure 1, column 2 line 58 - column 3 line 10, column 3 lines 26-35, and column 4 lines 12-19).

In view of Miller et al's teachings, it would have been obvious to one of ordinary skill in the art at the time of the invention to include, with the apparatus as taught by Pan et al as modified by Cohen et al, a storage medium removably connected with the data storage device, the splice data and the splice indicia being stored on the storage medium, the data storage device comprising a memory chip, the splice data and the splice indicia being stored in the memory chip, in order to allow user updating of the memory by replacing the storage medium.

5. Claim 6, 18, and 38 are rejected under 35 U.S.C. 103(a) as being unpatentable over Pan et al as modified by Cohen et al as applied to claims 1, 13, and 35 above, and further in view of Hishikawa et al (US 6,206,583, previously cited).

Pan et al also teaches the use of a camera 91 for monitoring and displaying the optical fiber splice (see figures 2, 3, and column 4 lines 45-52).

Pan et al as modified by Cohen et al fails to specifically teach the splice data including image data representing images of at least a portion of each of the optical fiber splices.

Hishikawa et al teaches an apparatus (splicer 1) for receiving splice data for each of a plurality of optical fiber splices, the splice data including image data representing images of at least a portion of each of the optical fiber splices (see figures 1, 2, column 1 lines 52-67, column 3 lines 22-29, and column 3 line 36 - column 4 line 11).

In view of Hishikawa et al's teachings, it would have been obvious to one of ordinary skill in the art at the time of the invention to include, with the apparatus and method as taught by Pan et al as modified by Cohen et al, the splice data including image data representing images of at least a portion of each of the optical fiber splices, in order to provide the ability to detect defects in the splice and/or defects in the operation of the splicer.

6. Claims 9, 11, 21, 22, 26, and 27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Pan et al as modified by Cohen et al as applied to claims 1 and 13 above, and further in view of Haydon (US 4,889,977).

Pan et al as modified by Cohen et al fails to specifically teach an optical wand coupled with the data interface for reading the splice indicia, an external storage device interface coupled to the data interface, and a housing containing at least a portion of the data interface and at least a portion of the data storage device, the external storage device interface being configured to receive the splice data and the splice indicia from

an external storage device external to the housing, a keypad coupled with the input data interface for receiving the selected splice indicium.

Haydon teaches an optical wand (17) coupled to a data interface (within scanner 23) for reading indicia (bar code 15), an external storage device interface (not shown) coupled to a data interface, and a housing (the housing of the scanner 23) containing at least a portion of the data interface and at least a portion of a data storage device (the memory of the scanner 23), the external storage device interface being configured to receive the data and the indicia from an external storage device (a computer) external to the housing (the scanner may be programmed by a downloading process from a computer into the scanner), a keypad (buttons 33) coupled with the input data interface for receiving the selected splice indicium (the scanner 23 may be programmed using buttons 33) (see figure 2 and column 2 lines 25-53).

In view of Haydon's teachings, it would have been obvious to one of ordinary skill in the art at the time of the invention to include, with the apparatus as taught by Pan et al as modified by Cohen et al, an optical wand coupled with the data interface for reading the splice indicia, an external storage device interface coupled to the data interface, and a housing containing at least a portion of the data interface and at least a portion of the data storage device, the external storage device interface being configured to receive the splice data and the splice indicia from an external storage device external to the housing, a keypad coupled with the input data interface for receiving the selected splice indicium, in order to allow accurate reading of closely

spaced indicia, without mistakenly reading the wrong indicia, and to allow updating of the storage device.

7. Claims 10 and 23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Pan et al as modified by Cohen et al as applied to claims 1 and 13 above, and further in view of Garber et al (US 6,232,870 B1).

Pan et al as modified by Cohen et al fails to specifically teach the data interface further including an electronic memory device input interface and an electromagnetic probe connected to the electronic memory device input interface for reading the splice indicia from a memory of an electronic memory device.

Garber et al teaches an apparatus for reading information (see figure 13), the apparatus including a data interface including an electronic memory device input interface and an electromagnetic probe (an RFID reader) connected to the electronic memory device input interface for reading the indicia (information) from a memory of an electronic memory device (an RFID tag) (see figure 13, column 12 lines 1-8, and column 15).

In view of Garber et al's teachings, it would have been obvious to one of ordinary skill in the art at the time of the invention to include, with the apparatus and method as taught by Pan et al as modified by Cohen et al, the data interface further including an electronic memory device input interface and an electromagnetic probe connected to the electronic memory device input interface for reading the splice indicia from a memory of an electronic memory device, since an electronic memory device (an RFID

tag) is an art recognized functional equivalent to a bar code (see column 12 lines 1-8 of Garber et al.).

8. Claims 44-46 and 48 are rejected under 35 U.S.C. 103(a) as being unpatentable over Cohen et al in view of Haydon and Miller et al.

Cohen et al teaches a portable data collection device apparatus (optical scanner 14) for retrieving splice data (for example: the physical location of the receptacle, the type of jumper to be used with the receptacle, etc., see at least column 2 line 66 - column 3 line 24) for a splice (each receptacle 6 represents an optical fiber splice, since it is a connection point between different optical fibers), the apparatus being in communication with a storage device (memory 18) storing splice data for a plurality of splices (each of the receptacles 6) including a first splice, the apparatus comprising: a reader configured to read a first splice indicium (each receptacle 6 includes unique optically-encoded data 9) from the first splice (see figures 1A, 1B, 4-6, column 1 lines 31-42, column 2 lines 18-60, column 2 line 66 - column 3 line 65, column 4 line 33 - column 7 line 60, column 9 line 11 - column 10 line 18).

While Cohen et al teaches a processor (17) coupled to the reader (the processor is coupled to the reader via a radio link, including receiver interface 16) and configured to receive the splice indicium and to retrieve splice data from the storage device associated with the first splice indicium, the processor and the storage device are provided in a separate computer (15), Cohen et al fails to teach the portable data collection apparatus comprising a processor coupled to the reader and configured to receive the splice indicium and to retrieve splice data from the storage device

associated with the first splice indicium, the portable data collection apparatus including the storage device; the storage device and the processor being at least partially disposed within the same housing, a data interface coupled to the processor.

Haydon et al teaches a portable data collection device apparatus (portable scanner 23) for retrieving data, the apparatus being in communication with a storage device (the memory of the portable scanner 23) storing data for a plurality of indicia (bar codes 15), the apparatus comprising: a reader (scanning wand 17) configured to read a first indicia (one of the bar codes 15), a processor (the portable scanner 23 necessarily includes a processor) coupled to the reader and configured to receive the indicia and to retrieve data from the storage device associated with the first indicia, the portable data collection apparatus including the storage device, the storage device and the processor being at least partially disposed within the same housing (the housing of the scanner 23), a data interface coupled to the processor (the data may be entered into the scanner 23 by a downloading process from a computer, thus the scanner necessarily includes a data interface coupled to the processor) (see figure 2 and column 2 lines 25-53).

In view of Haydon et al's teachings, it would have been obvious to one of ordinary skill in the art at the time of the invention to include, with the apparatus as taught by Cohen et al, the portable data collection apparatus comprising a processor coupled to the reader and configured to receive the splice indicium and to retrieve splice data from the storage device associated with the first splice indicium a portable power source powering the processor, the portable data collection apparatus including the storage device, the portable power source powering the storage device, the storage

device and the processor being at least partially disposed within the same housing, a data interface coupled to the processor, in order to provide the splice data directly to the scanning device and the operator, thus relieving the operator of the necessity to refer to separate computer to view the splice data.

Cohen et al as modified by Haydon fails to specifically teach a portable power source powering the processor, the portable data collection apparatus including the storage device, the portable power source powering the storage device, and the portable power source being a battery.

Miller et al teaches a portable data collection apparatus (10) having a battery (16) as a portable power source for supplying all required power to the apparatus (see figures 1, 3, column 2 line 58 - column 3 line 9, and column 4 lines 12-19).

In view of Miller et al's teachings, it would have been obvious to one of ordinary skill in the art at the time of the invention to include, with the apparatus as taught by Cohen et al as modified by Haydon, a portable power source powering the processor, the portable data collection apparatus including the storage device, the portable power source powering the storage device, the portable power source being a battery, in order to provide all required power to the apparatus.

9. Claim 47 is rejected under 35 U.S.C. 103(a) as being unpatentable over Cohen et al as modified by Haydon and Miller et al as applied to claim 44 above, and further in view of Pan et al.

As discussed above, Cohen et al as modified by Haydon and Miller et al teaches a data interface coupled to the processor.

Cohen et al as modified by Haydon and Miller et al fails to specifically teach the data interface being removably connectible with a data interface of an optical fiber splicer.

Pan et al teaches an optical fiber splicer (operations unit 10) having a data interface (I/O communication and control 20) for outputting splice data (see figures 1-3, 9A, 9B, column 1 lines 51-56, column 2 lines 25-44, column 3 lines 4-7, column 4 line 45 - column 5 line 51, and column 8 line 49 - column 9 line 9).

In view of Pan et al's teachings, it would have been obvious to one of ordinary skill in the art at the time of the invention to include, with the apparatus as taught by Cohen et al as modified by Haydon and Miller et al, the data interface being removably connectible with a data interface of an optical fiber splicer, in order to provide the apparatus with new splice data directly from the splicer.

Allowable Subject Matter

10. Claims 49-51 have been allowed over the prior art of record.
11. The following is an examiner's statement of reasons for allowance: The prior art of record, taken alone or in combination, fails to teach or fairly suggest: a method for retrieving splice data for a splice from a subset of splices, the method comprising the steps: selecting the subset of splices from a larger set of available splices, the subset including a first splice, transferring a pre-stored plurality of splice indicia associated with the subset of splices, and splice data associated therewith, to a first storage device, in combination with the other claimed limitations as set forth in the claims.

While Pan et al teaches selecting a subset of splice data (qualified records, records that match the record selection criteria are stored in a qualified records data file, see figure 9A and column 8 line 60 - column 9 line 2) from a larger set of available splice data (all of the fabrication data files), Pan et al only teaches displaying and printing the qualified records (the subset). Pan et al does not teach transferring the data associated with the subset to a storage device.

Haydon teaches that data may be transferred to a storage device (the scanner 23 may be programmed by a downloading process from a computer into the hand-held scanner, see column 2 lines 40-45). However, Haydon does not teach only transferring a subset of data, associated with bar codes 15, to the storage device.

Therefore, without the benefit of applicant's teachings, there is no motivation for one of ordinary skill in the art at the time of the invention to combine the prior art in a manner so as to create the claimed invention.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Response to Arguments

12. Applicant's arguments with respect to claims 1-6, 8-28, and 35-48 have been considered but are moot in view of the new ground(s) of rejection. As discussed above, the newly cited references to Cohen et al, Miller et al, Haydon, and Garber et al have now been applied.

Conclusion

13. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Mahmood et al (US 6,341,242 B1) teaches associating a bar code with every fiber optic splice in a fiber tray (see column 7 lines 27-46).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jared J. Fureman whose telephone number is (703) 305-0424. The examiner can normally be reached on 7:00 am - 4:30 PM M-T, and every other Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael G. Lee can be reached on (703) 305-3503. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 308-7722 for regular communications and (703) 308-7722 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.

JJF
jjf

November 4, 2002

Karl D. Frech
KARL D. FRECH
PRIMARY EXAMINER